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Analysis of Challenges for Improvements on Process Management in the Perception of Professionals Acting in a Pension Fund in Brazil.

Marco Antonio Garcia Jorge[a,b], Saulo Barbará de Oliveira[a,]*

[a] *Universidade Federal Rural do Rio de Janeiro, Seropédica 23850-230, Brazil.*
[b] *Caixa de Previdência dos Funcionários do Banco do Brasil, Rio de Janeiro, 22250-040, Brazil.*

Abstract

This work was performed in a pension fund as part of the construction of a method for evaluating the performance improvements of business processes, whose goal is to raise the vision of the future perceived by professionals working in the organization to check the "desirable" status and make gap analysis in relation to academic studies on the subject, based on reference article of Rosemann, Indulska, et al., which analyzed current issues and future challenges on modeling processes using three groups: academics, practitioners and professional tool vendors. It is hoped that this paper will contribute in three ways: aligning the future vision of the organization with the academic vision for improving their business processes, providing feedback to strategic process in relation to the pillars of Process Management and improving self-knowledge about their organizational vision of future in the area of process improvement.

Keywords: process management; strategic processes; performance improvement; gap analysis.

* Corresponding authors. Tel.: 55-24-8819-0107, 55-21-9973-9067.
E-mail address: saulobarbara@gmail.com.

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1. Introduction

The competition in today's markets entails greater control of governments in managing the organization through regulatory interference. These interferences are forcing companies to build strategies to increase their market share, requiring therefore acting in accordance with best practices and constant legal adjustments. They also need to improve their internal structures, their organizational architecture and to analyze and improve their internal processes to support strategic decisions with timeliness and efficiency. Some problems noted by the researchers in the organization context, gave rise to the opportunity to study under the current paradigm:

- Organizations known as pension funds with ties to the government system are service "providers" and have not gone through the motions of quality developed by the industrial sector:
- Total Quality Control, TQC by Armand Feigenbaun, Joseph M. David Garvin and Juran [10, 26];
- Phillip Crosby (compliance to specifications), William E. Deming (client specifications) [11];
- The People and Teamwork, PWT, H. T. Johnson [9];
- The processes supported by tools and Communication Technology, that is, Information Technology and Communications (ITC), by Davenport, Hammer [12].

It is not common for pension funds to have a quality policy along the lines of industrial organizations. The formers think of quality as a strategic systemic approach [13]. To cater to its core business, that is, to ensure the retirement of the participants, they need to improve their governance processes, risk management and compliance (GRC):

- In general, there is no formal process in these organizations to evaluate the set of processes in place, or measurements. The audit work is fragmented. Expert systems focus on ITC solutions;
- The specialization in organizational environments of pension funds, hierarchical and upright, hinders the advancement of process-centric approaches, which require horizontal permeability [7] so that management systems allow the creation of customer value [8].

Hammer and Champy [12] identified three forces that created this new world of change, complexity and constraints [26]: customers, competitors and change. For them, the change would become constant. Given the context, there is a need for further studies relating to internal processes that contribute for the organization to enable the requirements in the "constant" changing environment: flexibility, grip changes, ability to promote empowerment, timing and increased decision-making capacity. Thus, the search for the understanding of the collective vision and organizational feedback of a gap analysis results in relation to academic studies, will provide an opportunity to improve the management process and hence the organizational decision-making process.

2. Research Objectives

The objectives of the research is to raise the vision of the future on process improvement perceived by professionals acting in this type of organization and to compare it to academic studies in order to provide feedback to an interaction of a new construction method that uses gap analysis. The method is not intended to be explained in these paper, only the process that feedbacks it. Specific objectives are: to conduct a survey to raise the vision of the future of these professionals on process improvement based on four dimensions: quality, process (methods), tools and people and perform comparative analysis of alignment with the academic view related to Rosemann and Indulska et al. article [6]. According to Yin spud Roesch [24], the case study is a research strategy that uses a present context to examine a contemporary phenomenon: it has some boundaries and suggests some limitations.

The research is justified by the development activities aligned with strategic objectives of pension funds in Brazil by supporting the implementation of mechanisms and tools for continuous process improvement and the opportunity to integrate academic studies with applied solutions, contributing to the improvement of organizational practices.

3. Theoretical studies

Organizations can be seen and managed as systems from conceptual models. The models are used to see how business decisions affect the company as a whole. In 1995, Porter introduced the concept of Value Chain, a methodology whose aims are to look inside organizations and identify competitive advantages [1, 2 and 11]. By using these conceptual models, you can see that ITC tools are sources of competitive advantages that are essential to the success and sustainability of the organization, although defined as secondary activities in the value chain (i.e., they are support activities not directly related to the business of the organization, the core business). One can relate the concept of core business, with the concept of core competencies [10] or essential ones [17].

For Morgan [16], organizations contain people (who are the systems themselves) that belong to groups or departments, which have larger organizational divisions. The author presents the metaphor of the organisms to show a vision of the companies in the light of inspiration in biology. Organizational Culture means "The set of perceptions, attitudes, values and behaviors, summarized in organizational ideology in terms of expertise and collective behaviors predominate"[18]. Culture is a source of building vision of the future, because people are the organization and culture arises in the formation of formal and informal groups. Figure 1 shows the basic dimensions of the overall study: methodology, tools (ITC), quality and people, what have a central role in the strategic vision of the systemic approach.

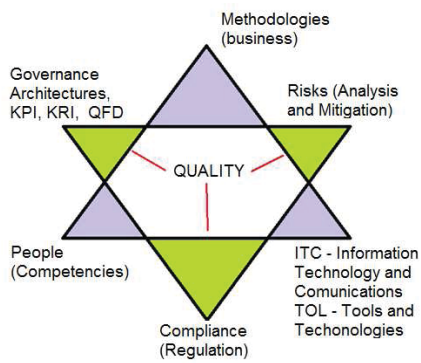

Figure 1: Dimensions for process management and Governance processes (source: authors).

To Feigenbaum cited in Valle & Peixoto [19], the practice of effective human relations is the basis of quality control focused on customer satisfaction. They define quality of products and services as: “the total combined characteristics for products and services, marketing, engineering, manufacturing and maintenance through which the products and services in use will meet customer expectations”. This study uses the approach of quality based on mechanisms of governance, analysis and mitigation of Risks and Compliance (GRC) opposed to complex systems of certification and accreditation commonly adopted at industrial organizations.

The Internal Control Manual [14] defines the functions of the internal controls in line with five business objectives: efficiency and effectiveness, accuracy, completeness, reliability, effective risk control, compliance

with laws and regulations. The risk has a degree of acceptability, which defines the necessary resources for its control, measured either qualitatively or quantitatively. The other dimension in the study is the processes, their reference models and their architectures. Reference models, such as 8-Omega ORCA [30], ValIT 2.0 (www.isaca.org) and VRM 3.0 (www.value-chain.org), have ITC tools that accelerate the process management improvements [31]. They can be a piece of an Enterprise Architecture (EA), structurally attached to the people-intensive systems of the organizations. Two ideas are opposed: the EA has its inherently structural and that EA can best be represented by models. Such counterpoints serve to strengthen both visions [20, 21].

Model of Management means the structured and organized presentation of how the interaction between internal systems, formal and informal, happens, ensures the compliance with business strategies supported by people within a formal organization of power [18]. Strategy means: "The scale of market-oriented and external issues, which will direct the organization's way of operating the business in which it will focus its priorities and targets aimed at achieving its long-term vision".

Assessment is the act of assigning a value or opinion for decision-making with possibility of feedback. Results act of comparison between the results found by someone and legitimized. Key results indicators are the KRI and the performance, KPI [22]. Thus, performance indicators get the information to portray the performance and define corrective actions to be performed by control systems. Diagnostic control systems are formal information systems used by managers to monitor the outputs of the processes and correct deviations beyond the expected [23].

An article published by Rosemann, Indulska et al. [6] used the Delphi method with three global active segments in process management to align current issues between them, and especially the future challenges in modeling processes with five-year vision. They performed three separately rounds for each of the three groups, classified as: academic, management tools sales professionals and practioners in process management, the target group analyzed in this paper. Among many other related papers, this one is much closer to our studies, as it focuses on the actual issues and future challenges. Others researches from Rosemann et al. refers to risk management, root cause analysis, etc. The reference paper aims to identify three main problems: standardization of process modeling, identification of the value of process modeling and process execution from models [6] and uses a classification of six areas based on the study of Rosemann with T. de Bruin: strategic alignment, governance, method, ITC, people and culture. It reveals that these areas are necessary for the establishment, progress and maturity of business process modeling.

4. The environment of organization in study

Pension Funds are non-profit civil associations that capture savings from employees and sponsors to deliver products and services to these employees when retiring, when they are called “assisted”. Some common products to pension funds are pension plans, aimed at raising funds for retirement security, cash plans and pension benefits of annuities for a lump sum on death, disability, or simple loans reflected in payroll, etc. Pension plans changed significantly in Brazil and some others countries at the end of last millennium. They had a mutual character and worked subject to rules relating to pensions calculated on the basis of incomes perceived by employees through the latest laboring years. With the paradigm shifts brought by neoliberal ideology and philosophical doctrines of the New State, the plans were transformed into individualist voluntary account (although, beforehand, the mutualism was also optional).

These changes involved increasing government control over pension funds, resulting in these entities being used to invest in acquisition of industries with private capital in the process that moved companies like Vale, Embraer, Telerj, etc. away from state management. The external environment creates opportunities for pension funds to diversify their assets, increase profitability and exceed their actuarial targets, with increased

return on investments in equity. Pension funds invest in different markets, such as fixed income, equities, with participation in the governing or advisory bodies of private companies, in real estate, including shopping malls. Although pension funds companies do not "compete" with each other as free market, there are internal pressures for positive results, for goal achievement and maintenance of actuarial plans with a surplus. An analysis of five forces model of Porter's environmental threats [1, 2] applied to the set of pension funds, according to probability levels indicates greater risks in foreign competition by multi sponsoring. As a result, the strategic planning processes of these organizations are translated into strategic objectives that not only aim to improve the management of its processes but also formalize visions of the future as being the benchmark in knowledge management. They intend to implement a process management methodology and build pension programs education aligned to the government regulatory systems, to improve mechanisms for sustainability, environmental responsibility and corporate governance, develop plan for management / review of the organizational culture and so on.

The formal establishment of the Knowledge Management Program in pension funds consolidated the area of People Management and formalized the strategy from competencies, which was mapped as fundamental and specific [4]. The program included the following stages: mapping skills, cultural mapping and transformation of Corporate Education in Knowledge Management, Management Development Program, Professional Succession Program and managerial coaching sessions [4].

5. Research Methodology

Based on studies in organizations where the school of Organizational Development has a strong influence, the present study is diagnostic, applied, according to Roesch [24], it explores the organizational and market environments through surveys and definitions to generate solutions to problems. The research is a case study, based on a quantitative approach, applying a data collection instrument – questionnaire type (survey) containing seventeen questions using a Likert [27] scale of five responses: strongly disagree; disagree; not agree, nor disagree; agree and strongly agree, interval 1-5[29]. Sampling for this study was simple, equal to the population object of the study, initially developed with professionals who work in a pension fund. However, the form of data collection allows for stratification of the sample in the analysis from seven demographic variables: age, sex, length acting in the organization, length of experience with process management, type of organization, education and functional hierarchy level in the organization. At first, the stratification may be not relevant, unless the sample analysis presents considerable discrepancies, gaps or issues in the mean standard deviation (over 20 %, for example). The questionnaire contains seven demographic questions (to capture the variables presented) and seventeen closed questions with Likert scale based on four dimensions of study aligned with the de Bruin and Rosemann´s article classification areas and an open question with suggestions and comments to enrich the data collection.

The questionnaire was managed and sent by an electronically tool to all employees of the organization through e-mails containing a specific electronic link. The quality of acquisition was controlled by the tool through the following features:

- Identification of the unit questionnaire - each respondent receives a different link identifier associated with a questionnaire, controlled by the management tool;
- If the respondent has responded partially or completely, he can change the answers while the questionnaire collector is open;
- Reports can be extracted at any time, either the quiz is open or closed (paused or completed).

A pilot test was run with twelve respondents who sent in suggestions for changes and adjustments in the questions of some issues. Communications with respondents was also improved by means of later emails, when requested, and in the questionnaire itself, stating the intention, the objective and the desired study depth.

After the analysis of the questionnaires, the authors made comparisons with the theoretical studies, especially the Rosemann, Indulska et al.´s article, in order to make conclusions to the feedback process.

6. Results and discussions

The number of respondents met the expectation of the study. There were 119 respondents from a population of 500 professionals.

Levels	Time working in Org.? (%)	Acting on process? (%)	Type	Sex? (%)	Levels	how old? (%)	Levels	years of study? (%)	Levels	hierarchy level? (%)
[1] Less 2y	17,66	48,76	[1] Male	62,19	[1] Till 25]	0,85	[1] Und_grad	2,54	[1] Tec. Jr	32,79
[2] Bet [2y; 5y	32,77	20,16	[2] Female	35,29	[2] Bet 25; 35]	34,45	[2] Graduated	21,84	[2] Tec. Sr	47,05
[3] Bet [5y,10y	21,84	12,60			[3] Bet 35; 50]	52,94	[3] Post_Grad	65,54	[3] Manag.	11,76
[4] [10y or +	27,73	13,44		0,00	[4] + 50	11,76	[4] Master +	10,08	[4] Director	7,56
Don´t answer	0,00	5,04	Don´t answer	2,52	Don´t answer	0,00	Don´t answer	0,00	Don´t answer	0,84

Figure 2: Demographic resume of respondents (professionals). Source: authors.

Regarding the time of work in the organization, the majority of the sample includes experienced professionals, who may know the stage of the organization on strategic issues and improving issues, making it significant. It contrasts with professionals achieving seniority, between 2 and 5 years of work at the organization. Crossing the first two columns, it is perceived that most of the people, in spite of their seniority, have acted just a little time with Process and Project Management, Quality Control, Improvement and correlated issues. There are two possible analyses: first, that these approaches are new to the organization (what explains why a lot of experienced professionals that do not act on it); second, that the organization is focused on little groups of specialized professionals, so few professionals are responsible to do these functions). These results can be indicative of some needs to be developed by the organization, like: training their professionals, improving communications, developing systematic approaches and methodologies, etc. For example, ORCA 8-Omega is a full assessment on improving business process. It may help the organization raising their maturity level in many aspects. The KRI and KPI may conduct valuable information to track goals and objectives raised by 8-Omega. Relevant information extracted from demographic data is the 18% turnover in the last two years, 50% in the last five years that makes a 10% annual turnover. The light that turns on here is the need for systematic approaches to maintain the organization without disruption. The sample shows a high degree of education. About 75% have a post-graduation course degree, ages over 30 (70% +) and seniority level (60% +). This stratification enforces the sample as consisting of experienced professionals, most of them working on tactical segment. Only 30% work on operational segment. Professionals working on executive (board of directors and managerial sectors) segment are almost the same number, about 20%.

The sample was tested with de T-test with 95% confidence and may be considered quite a “normal” curve. The result for each question is depicted in figure-3.

Table 1 presents the results tabulated to form the top 10 ranks of mediums, less standard deviation and greater coefficient of variation (greater mediums by lesser deviations).

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
01.PEO	63,538	92	,000	4,516	4,37	4,66
02.MET	64,596	92	,000	4,484	4,35	4,62
03.GRC	52,360	92	,000	4,387	4,22	4,55
04.MET	41,766	91	,000	3,978	3,79	4,17
05.MET	64,847	91	,000	4,533	4,39	4,67
06.MET	50,051	92	,000	4,043	3,88	4,20
07.GRC	54,246	90	,000	4,341	4,18	4,50
08.TOL	50,066	89	,000	4,356	4,18	4,53
09.GRC	59,344	91	,000	4,359	4,21	4,50
10.PEO	59,103	90	,000	4,549	4,40	4,70
11.TOL	48,698	91	,000	4,293	4,12	4,47
12.TOL	61,491	90	,000	4,538	4,39	4,69
13.TOL	54,702	91	,000	4,380	4,22	4,54
14.GRC	63,088	90	,000	4,396	4,26	4,53
15.PEO	68,057	91	,000	4,522	4,39	4,65
16.GRC	37,424	92	,000	3,806	3,60	4,01
17.TOL	53,695	92	,000	4,258	4,10	4,42

Figure 3: SPSS output of the sample with 119 answers, with approximately 95% of confidence. (Source: the authors).

Table 1: Average results, standard deviation and coefficient of variation obtained in the questionnaires collected.

	Greater Mediuns	Issues?	Lesser Std Deviations	Issue?	Coeficient of Variation	Issue?	% of Variation Coeficient
1º	4,549	10.PEO	0,633	15.PEO	7,142	15.PEO	100,0
2º	4,538	12.TOL	0,660	14.GRC	6,804	05.MET	95,2
3º	4,532	05.MET	0,665	02.MET	6,741	02.MET	94,3
4º	4,521	15.PEO	0,666	05.MET	6,659	14.GRC	93,2
5º	4,516	01.PEO	0,681	01.PEO	6,631	01.PEO	92,8
6º	4,483	02.MET	0,700	12.TOL	6,482	12.TOL	90,7
7º	4,395	14.GRC	0,700	09.GRC	6,231	10.PEO	87,2
8º	4,387	03.GRC	0,730	10.PEO	6,225	09.GRC	87,1
9º	4,380	13.TOL	0,759	07.GRC	5,740	13.TOL	80,3
10º	4,358	09.GRC	0,760	17.TOL	5,718	07.GRC	80,0

(Source: the authors).

Frame 1: Relation of the three issues of most concern to professionals from the sample.

15. PEO-People- The organization must define the competences (knowledge, skills and attitudes) required and the roles played by professionals working in the area of business processes.
5. MET-Methods- The Organization must have a clear methodology and consistent, understood by all professionals.
2. MET-Methods- The standardization of methods for process management is important for the Organization.

Frame 2: Relation of the most relevant issue by other study dimensions, i.e., quality and tools, according to professionals.

GRC - The Organization shall act on Standardization and Conformity of business processes.
TOL - The organization must be concerned with the ease of use (usability) of the tools that support processes.

Frame 3: Relation of the most controversial issues, that is, that have great variations on coefficients and lesser medium.

MET - Running process in the organization should always occur from process methodologies.
GRC - The Organization must build Office Processes acting on strategic level of the organization.

In gap analysis between the survey and the academic research, it is observed that the organizational vision does not prioritize the value of modeling (the question 06.MET is not listed among the top ten coefficients) and do not include the organization of an office strategic processes (strategic systems view for process management). While they do not believe that the implementation of processes must always occur from methodologies, they consider that a clear and consistent approach, all disseminated by the organization, is a challenge. The interpretation of this possible paradox may be that the organization has a methodology or is developing one, but few know about it (what corroborates the communication issue on the demographic analysis).

Regarding the training issue, there is agreement between the two views, because they visualize the need to build expertise (15.PEO). The individual skills and organizational variables were considered extremely important and challenging for all groups surveyed. For the organization, this is the critical factor for value creation. The standardization consists in a major alignment between the pension fund professionals and the academic study by [6], where there is an issue and a challenge for both. Another point that should be clarified in future research is the discrepancy between the need for a clear methodology for the implementation of processes and start all processes from a methodology, where the difference lies only in the "clear methodology" for all professionals, not for a few professionals.

7. Final Considerations

Initial studies based on the survey show some alignment between the professionals and the academic researches. They contribute to the main objective, that is, to raise the future view of professionals achieving some gaps with academic researches. It is believed that aligning the vision to the researches creates an atmosphere to changes and also raises some issues that can be solved using ad-hoc or systematic approaches. The issues obtained with the survey may be treated in ad-hoc way using cause-effect diagrams of some king of Deming Diagram or Stewart's PDCA [11, 30]. But as this solution is punctual, it is not suitable for continuous improvement. It is suggested constructing a method that includes a previous assessment of the organization systematization for business process improvement and treating the results of this survey as source of information and guidance to reach the main objectives. Some tools related to maturity models are very suited to this systematization. One approach to systematization is the analysis of root cause stated by Rosemann in another article with M. Heravizadeh and J. Mendling. ORCA 8-Omega, from BPTG, VRM and some methods of scorecards may be used to construct the method for improvement.

It is agreed that the dimensioning of this survey in four areas makes it easier to deal with the solutions. Pension funds are organized in hierarchical structures and tend to treat the issues in areas of specialization. These dimensioning of the study may facilitate the systematic approach and the inclusion of the survey into a major method.

Future studies may expand the population to include professionals from other types of organizations and create further analysis with filters using demographic variables of the data collection instrument, combined or not. Although the demographic data was not previously considered in the study, it was proved that they can be useful in the analyses phase.

It is hoped that this study will contribute as inspiration for organizations to evaluate the alignment between their visions of the future, its methods and used tools, especially those in human capital intensive that requires constantly transformation on competences in a world where the "change" is forever.

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Appendix A. Research and demographic questionnaire (source: the authors).

Demographic questions:
1. Type of organization that currently works.
2. Time Working to this Organization.
3. Time Working with process management, projects, quality, Improve Performance or continuous improvement
4. Sex
5. Age
6. Level of education
7. Level in the organizational hierarchy

Dimensions questions
(People- 1,10 &15; GRC- 3,7,9, 14 & 16; Methods- 2,4,5 & 6; Tools- 8,11,12,13 & 17).
All dimensions questions has the following answers:
[1] totally disagree [2] disagree [3] Do not disagree or agree [4] agree [5] I totally agree

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1. The organization has to create mechanisms to overcome barriers and achieve good functional results with management practices and Process Design.
2. The standardization of methods for process management is important for the Organization?
3. There is a need for ongoing sponsorship of senior management, through the implementation of plans and programs in the Management Process.
4. Running processes in the organization should always occur from process methodologies.
5. The Organization must have a clear methodology and consistent, understood by all professionals.
6. The organization must define a value chain (Porter) for Process Modeling.
7. The Organization should establish a quality policy based Governance, Risk and Compliance, that leads north into a Business Process Management.
8. The organization must have mechanisms to identify the division between IT and Business alignment and those with organizational strategy.
9. The Organization must provide mechanisms for management, control, supervision and accountability in governance as a means of Process Management.
10. The Organization shall promote comprehensive training program for staff to create Organizational Culture Process.
11. The Organization should work with service orientation not only in IT but also in business processes, building a portfolio of services.
12. The organization must be concerned with the ease of use (usability) of the tools that support processes.
13. The organization must build solid technology architecture to encompass Business Process Management in order to provide features such as: flexibility, collaborative modeling and ease the integration of different views.
14. The Organization shall act on Standardization and Conformity of business processes.
15. The organization must define the competencies (knowledge, skills and attitudes) needed and the roles played by professionals working in the area of business processes.
16. The Organization must build an Office of reasoning processes acting on a strategic level of the organization.
17. The organization should develop an organizational architecture that encompasses business architecture, ITC (Information Technology and Communications) Governance, Risk and Compliance and align with organizational strategies.